



2. The method of glaim 1 wherein: said [semiconductor] device comprises silicon.

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- 6. (Amended) The method of claim 3 wherein said deuterium-enriched ambient is at superatmospheric pressure. [1 wherein said semiconductor device includes a plurality of active components.]
- 28. (Amended) A method for conditioning a [semiconductor] field effect transistor device to increase its resilience to hot carrier effects, comprising:

providing a field effect transistor device having conductive contacts for a source, drain and gate of the device;

disposing atomic, molecular or ionic deuterium in an area of said device subject to hot carrier effects; and

heating said device.

- 29. (Amended) The method of claim 28 which comprises diffusing molecular deuterium to said one or more areas and heating said device. [in which said device includes at least one metal oxide semiconductor field effect transistor.]
- 30. (Amended) The method of claim 29 which includes subjecting said device to a deuterium gas-enriched atmosphere at a temperature of about 200°C to about 1000°C. [in which said device includes a plurality of metal oxide semiconductor field effect transistors.]

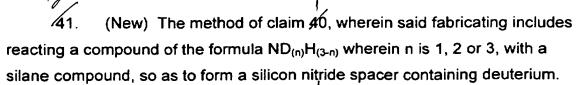
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- 32. (Amended) The method of claim 28 in which said device includes a silicon nitride layer, and wherein the method includes trapping [the] molecular deuterium within layers of the semiconductor device during fabrication.
- -- 40. (New) A method for making a silicon nitride spacer of a semiconductor device, comprising:

fabricating a silicon nitride spacer of a semiconductor device by reacting an ammonia compound with a silane compound, wherein at least one of said compounds contains deuterium, so as to form a silicon nitride spacer containing deuterium.







42. (New) The method of claim 40, wherein said silane compound contains deuterium.

43. (New) The method of claim $\frac{42}{2}$, wherein said silane compound is encompassed by the formula $SiD_{(m)}H_{(4-m)}$ wherein m is 1, 2, 3 or 4,

544. (New) The method of claim 42, wherein said silane compound is encompassed by the formula

Si₂D_oH_DX_q

wherein:

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o is 1, 2, 3, 4, 5 or 6;

p is 0, 1, 2, 3, 4 or 5;

q is 0, 1, 2, 3, 4 or 5; and

X is halogen, with the proviso that o + p + q = 6.

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45. (New) The method of claim 40, comprising reacting ND₃ with SiD₄ to form the silicon nitride spacer.

46. (New) The method of claim 40, comprising reacting ND₃ with SiCl₂D₂ to form the silicon nitride spacer.

- 47. (New) A method for obtaining a deuterium-passivated semiconductor device, comprising fabricating a deuterium-passivated semiconductor device, wherein said fabricating includes implanting atomic or ionic deuterium into said device, and heating said device.
- 48. (New) The method of claim 47, wherein said fabricating includes implanting atomic deuterium into said device and heating said device.
- 49. (New) The method of claim 47, wherein said fabricating includes implanting ionic deuterium into said device, and heating said device.